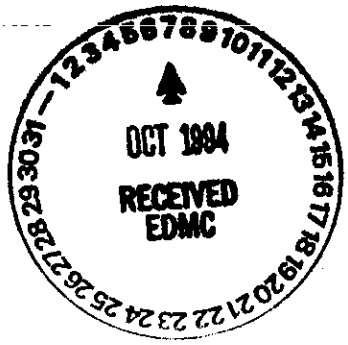
START

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

SEP 21 1994

94-SWT-587

Mr. D. L. Lundstrom, Section Manager
200 Areas
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. 4th Avenue
Kennewick, Washington 99336



Mr. Doug R. Sherwood
Hanford Project Manager
U.S. Environmental Protection Agency
Region 10
712 Swift Boulevard, Suite 5
Richland, Washington 99352

Dear Mr. Lundstrom and Mr. Sherwood:

NOTIFICATION OF START-UP FOR THE RADIOACTIVE MIXED WASTE DISPOSAL FACILITY (TRENCH 31)

This letter is to formally notify you that the U.S. Department of Energy, Richland Operations Office (RL) will commence startup of operations for the Low-Level Burial Grounds (LLBG) Trench 31 in November 1994 and are scheduled to complete construction of LLBG Trench 34 in Spring 1995. At this time, construction of Trench 34 is well ahead of schedule. Trench 31 and 34 are Resource Conservation and Recovery Act (RCRA)/Washington Administrative Code 173-303 Dangerous Waste Regulations compliant landfills.

Construction of Trench 34 is nearly identical to Trench 31 and also will accept bulk and containerized low-level mixed waste. During the design and construction of Trench 31 and 34, Mr. J. Hensley of the State of Washington Department of Ecology has been provided with all construction specifications, design drawings, engineering change notices, and has made numerous visits to the construction site. Mr. Dan Duncan (EPA) and Mr. Bob Cordts (Ecology) were given an briefing on the construction and startup at the LLBG Unit Managers Meeting held on September 1, 1994. Attached is a more detailed description of the trenches.

Should you have any questions or require further information on the startup of Trench 31 or the construction of Trench 34, please contact A. K. Crowell, RL, on (509) 372-2346 or Mr. R. D. Pierce of the Westinghouse Hanford Company on (509) 372-0732.

Sincerely,

June M. Hennig, Director
Waste Management Division

Attachment

cc w/att:
J. Atwood, Ecology
R. Cordts, Ecology
D. Duncan, EPA
W. Hamilton Jr, WHC
J. Hensley, Ecology
M. Jaraysi, Ecology
R. Pierce, WHC
R. Bowman, WHC
Administrative Record, H6-08
B. Burke, CTUIR
R. Jim, YIN
D. Powaukee, NPT

Attachment 1: Description of Radioactive Mixed Waste Disposal Facility

Trench 31 and 34 are located in the northwestern portion of the 200 West Area in Burial Ground 218-W-5 of the Hanford Site. Trench 31 and 34 are rectangular landfills with approximate base dimensions of 250 feet (76.2 meters) by 100 feet (30.5 meters) and a surface grade footprint of 3.2 acres (1.3 hectares). The floor of both trenches slopes slightly, giving a variable depth of 30 to 40 feet (9.1 to 12.2 meters). The floor slope is a minimum of two percent, draining to a recessed section at the eastern end that houses the sumps for leachate collection. The side slope ratio is 3H:1V. Access to the trench floor is provided by a ramp (eight percent slope).

Trench 31 and 34 were constructed with a double liner and leachate collection and removal system. The bottom and sides of Trench 31 and 34 are covered with a 3-foot (0.9-meter) operations layer of soil to protect the liner system during fill operations. Additional layers progressing toward the subgrade for Trench 31 and 34 floor include: (1) a geotextile that will act as a filter between the operations layer and the primary drainage gravel, (2) a 1-foot (0.3-meter) layer of primary drainage gravel, (3) a geotextile that will act as a cushion between the drainage gravel and the primary and secondary geomembranes, (4) a geonet with high transmissivity functioning as a redundant drainage system in conjunction with the drainage gravel on the floor, (5) the primary leachate barrier, a 60 mil high-density polyethylene (HDPE) liner, (6) 1.5-foot (0.46-meter) of compacted clay/soil admix, (7) a geotextile cushion, (8) 1-foot (0.3-meter) of drainage gravel, (9) a geotextile cushion, geonet and a secondary 60 mil HDPE liner, and (10) 3.1 feet (.94 meters) of admix material (clay/soil) meeting permeability requirements. On the trench sideslopes, the primary and secondary liner systems utilize geocomposite (two geotextiles thermally bonded to a geonet) drainage layers instead of the drainage gravel and geotextiles used on the floor.

The primary leachate collection system is composed of 4-inch (10.2-centimeter) diameter perforated drainage pipes that lie along the centerline of the floor, at the base of the side slopes, and down the 'upslope' side of the access ramp. The floor slopes will direct leachate to the center of the floor, which also slopes down toward the sump area located at the east end of the Trench 31 and 34. The secondary leachate collection system is installed above the secondary liner system. Pumps are provided in both the primary and secondary sump areas. Collected leachate will be pumped to a RCRA/WAC 173-303 compliant 10,000 gallon (37,854 liters) storage tanks. Trench 31 and 34 were designed with consideration for the 24 hour peak precipitation event (1.56 inches (3.96 centimeters) in a 25 year period.